

CLAIMS

1. An image forming apparatus comprising:

light-emitting means for emitting a light beam in  
accordance with image data representing pixels arranged  
5 in a main scanning direction and a sub-scanning  
direction;

an image carrier for forming an electrostatic  
latent image when scanned with the light beam emitted  
from the light-emitting means;

10 scanning means for scanning the image carrier with  
the light beam emitted from the light-emitting means,  
said scanning means including a polygon mirror for  
reflecting the light beam;

first drive means for rotating the polygon mirror;

15 second drive means for rotating the image carrier,  
thereby to move a surface of the image carrier in the  
sub-scanning direction;

developing means for applying developer onto the  
image carrier, thereby to develop the electrostatic  
20 latent image into a visible image;

transfer means for transferring the visible  
image from the image carrier onto an image-forming  
medium;

first speed-changing means for changing a rota-  
25 tional speed of the first drive means in accordance  
with an error in magnification in the main scanning  
direction, said error being determined from a size

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ratio of the visible image transferred onto the image-forming medium to an original document image; and

second speed-changing means for changing  
a rotational speed of the second drive means in  
5 accordance with the change in the rotational speed  
of the first drive means.

2. An apparatus according to claim 1, wherein the first drive means has clock input means for inputting a reference clock data and rotates the polygon mirror  
10 at a speed corresponding to the reference clock data, and the first speed-changing means has data input means for inputting data representing the reference clock corresponding to the error.

3. An apparatus according to claim 1, further  
15 comprising data-reading means for optically reading data printed on the document sheet and for providing the data, thus read, as said image data.

4. An apparatus according to claim 1, which further comprises facsimile means for receiving  
20 facsimile data from an external apparatus and providing the facsimile data as said image data, and in which the first speed-changing means has:

third speed-changing means for changing the rotational speed of the first drive means to a new  
25 rotational speed in accordance with an error in magnification in the main scanning direction, said error being determined from a size ratio of the visible

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image represented by the facsimile data and transferred onto the image-forming medium to an original document image; and

5 storage means for storing data representing the new rotational speed as data at which first drive means should be rotated in order to form an image represented by the facsimile data.

10 5. An apparatus according to claim 1, which further comprises printer control means for receiving code data from an external apparatus, processing the code data into font data representing characters having a size represented by character size data added to the code data and providing the ~~front~~<sup>font</sup> data as said image data, and in which the first speed-changing means has:

15 third speed-changing means for changing the rotational speed of the first drive means to a new rotational speed in accordance with an error in magnification in the main scanning direction, said error being determined from a size ratio of a size of character in the visible image represented by the code data transferred onto the image-forming medium to the size represented by the character size data; and

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25 storage means for storing data representing the new rotational speed as data, at which first drive means should be rotated in order to form an image represented by the code data.

6. A method of forming an image, comprising

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the steps of:

emitting a light beam in accordance with image data representing pixels arranged in a main scanning direction and a sub-scanning direction;

5 scanning an image carrier with the light beam in the main scanning direction by reflecting the light beam by means of a rotating polygon mirror;

rotating the image carrier, thereby moving a surface of the image carrier in the sub-scanning direction and forming an electrostatic latent image on the surface of the image carrier;

10 applying developer onto the image carrier, thereby to develop the electrostatic latent image into a visible image;

15 transferring the visible image from the image carrier onto an image-forming medium;

changing a rotational speed of the polygon mirror in accordance with an error in magnification in the main scanning direction, said magnification being determined from a size ratio of the visible image transferred onto the image-forming medium to an original document image and

20 changing a rotational speed of the image carrier in accordance with the change in the rotational speed of the polygon mirror.

25 7. A method according to claim 6, wherein the step of scanning an image carrier includes a step of

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inputting a reference clock data and a step of rotating  
the polygon mirror at a speed corresponding to  
the reference clock data, and the step of changing  
a rotational speed of the polygon mirror includes  
5 a step of inputting data representing the reference  
clock corresponding to the error.

8. A method according to claim 6, further  
comprising a step of optically reading data printed on  
the document sheet and providing the data, thus read,  
10 as said image data.

9. A method according to claim 8, wherein the  
step of optically reading data includes a step of  
reading an image of a scale, and the step of changing a  
rotational speed of the polygon mirror includes a step  
15 of changing the rotational speed of the polygon mirror  
in accordance with an error in magnification in the  
main scanning direction, said error being determined  
from a size ratio of the visible image transferred onto  
the image-forming medium to an original scale image.

20 10. A method according to claim 6, which further  
comprises a step of receiving facsimile data repre-  
senting the image of the scale and supplying the  
facsimile data as said image data, and in which the  
step of changing the rotational speed of the polygon  
25 mirror includes a step of changing the rotational speed  
of the polygon mirror to a new rotational speed in  
accordance with an error in magnification in the main

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scanning direction, said error being detected from  
a size ratio of the visible image represented by the  
facsimile data and transferred onto the image-forming  
medium to the original image of the scale, and a step  
5 of storing the new rotational speed as data, at which  
the polygon mirror should be rotated in order to form  
an image represented by the facsimile data.

11. A method according to claim 6, which  
further comprises a step of receiving code data from  
10 an external apparatus, processing the code data into  
font data representing a character having a size  
represented by character size data added to the code  
data and in which the step of changing the rotational  
speed of the polygon mirror includes a step of changing  
15 the rotational speed of the polygon mirror to a new  
rotational speed in accordance with an error in  
magnification in the main scanning direction, said  
error being determined from a ratio of a size of the  
character in the visible image represented by the code  
20 data and transferred onto the image-forming medium to  
a size represented by the character size data, and  
a step of storing the new rotational speed as data at  
which the polygon mirror should be rotated in order to  
form an image represented by the code data.

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